

REMARKS

The Applicants have reviewed the Examiner's Office Action dated August 24, 2005. The Applicants hereby provide the following remarks concerning the Examiner's rejection of the claims under 35 U.S.C. 102(b) and 103(a).

The Examiner has rejected claims 8 and 9 under 35 U.S.C. 102(b) as being anticipated by Briffe et al. (U.S. Patent No. 6,112,141).

As to claim 8, the Examiner asserts that Briffe teaches an avionics system having displays with display configuration pilot-selected for a phase of flight of an aircraft and reconfigurable for each phase of flight comprising:

a flight display for storing and displaying phase of flight display configurations each phase of flight of the aircraft (the flight plan can be stored in the memory and displayed on the display screen, e.g., col. 3 lines 10-30, and col. 7 lines 58-67, and fig. 21); and

a cursor control panel (e.g., col. 11 lines 56-60, and col. 12 lines 5-43) connected to the flight display for changing from one stored phase of flight display configuration to another store phase of flight display configuration when selected by the pilot for a phase of flight and for reconfiguring the display configuration for each phase of flight (the existing flight plan displayed on the screen can be modified by the crew with new parameters, e.g., col. 39 lines 30-63).

Briffe teaches what the Applicant regards as prior art. The Examiner is respectfully asked to read the Background of the Invention, page 1, of the present application. The Applicant describes how prior art attempts at automating cockpit display configurations for climbing to an altitude, cruising at an altitude, and descending have been made by using a series of preset display configurations for each phase of flight. The pilot selects a phase of flight configuration and the display is automatically reconfigured depending on the aircraft flight phase to the preset configuration for that phase. The display configuration is preset and cannot be reconfigured.

In Briffe, the display is configured as shown in Figure 21 for take-off and cruise and is selected by the pilot with the "FLT PLAN" key in main menu 122 of Figure 9. There is no disclosure in Briffe of reconfiguring the display format.

Storing a flight plan and displaying on the display is not reconfiguring the display. The display format is fixed as shown in Figure 21. The only change made to the display in Briffe is the data itself as stated by the Examiner as 'the flight plan can be stored in the memory and displayed on the display screen, e.g., col. 3 lines 10-30, and col. 7 lines 58-67, and fig. 21" and "the existing flight plan displayed on the screen can be modified by the crew with new parameters, e.g., col. 39 lines 30-63". This displaying and changing of data on the display is not the same as reconfiguring the display format for each phase of flight as disclosed by the Applicant.

In Applicant's invention the display format, i.e. what data is shown for each phase of flight, can be reconfigured by using a cursor control panel reprogram the display format. For example referring to Figure 3 of the present application, a middle window 310 of the display can be reconfigured to be vertical terrain display, a checklist index, or a flight management system text format. The lower window 320 may be one of six display formats selected by the pilot and reprogrammed for a selected phase of flight. Briffe does not disclose this functionality. Claim 8 is allowable over Briffe.

As to claim 9, the Examiner asserts that Briffe teaches the avionics system of claim 8 wherein the flight display further comprises:

a middle window for displaying a pilot-selectable display configuration; a lower window for displaying a pilot-selectable display configuration; and line select keys for selecting the middle window and lower window display configuration (e.g., col. 31 lines 10-55, and fig.21)

As discussed above, Briffe does not disclose displaying a pilot selectable display configuration. The display configuration of Figure 21 is fixed. The referenced column and lines disclosed loading a flight plan and say nothing about reconfiguring the display format as taught by the Applicant. Claim 9 is allowable over Briffe.

The Examiner has rejected claim 1-7, 10-14 under 35 U.S.C. 103(a) as being unpatentable over Briffe et al. (U.S. Patent No. 6,112,141) in view of D'Hooge et al. (U.S. Patent No. 6,636, 354 B1).

As to claim 10, the Examiner asserts that Briffe teaches the avionics system of claim 9 wherein the cursor control panel further comprises phase of flight quick access pushbuttons for selecting a stored phase of flight configuration and for reconfiguring a stored phase of flight configuration into a new phase of flight configuration by selecting the new configuration with controls on the cursor control panel and pressing a phase of flight quick access pushbutton for storing the new configuration (pushbutton 518 for changing the ALT setting, e.g., col. 24 lines 27-34, col. 26 line 66-col. 27 line 16 and fig. 20); however, the Examiner states that Briffe does not teach of pressing the pushbutton for a predetermined time to store a new setup. The Examiner then further states that D'Hooge clearly shows that the user may press and hold the switch button for an extended period of time to indicate that the feature is desired (e.g. col. 9 line 66-col. 10 line 3). The Examiner believes that it would have been obvious at the time of the invention, a person with ordinary skill in the art would want to have the pressing button for a period of time of D'Hooge in the Flight Management System of Briffe to ease the user to distinguish between a normal or a desired selection which the user really wants to operate.

As discussed above in the remarks for claims 8 and 9 Briffe does not teach reconfiguring a stored phase of flight configuration. Briffe only discloses selecting a stored fixed phase of flight configuration and changing the data shown in the fixed configuration. Claim 10 is allowable over Briffe in view of D'Hooge.

As to claim 11, the Examiner states that the modified Briffe teaches the avionics system of claim 10 wherein the cursor control panel further comprises:

although, Briffe teaches a climb quick access pushbutton (518) and soft buttons (the soft buttons for setting CLIMB, DESC, and cruise speed, e.g., col. 28 lines 35-57, col. 32 line 10 and lines 50-59) for selecting a climb phase of flight display configuration and for reconfiguring the climb phase of flight display configuration, selecting a cruise phase of flight display configuration and for reconfiguring the cruise phase of flight configuration, and selecting a descend phase of flight display configuration and for reconfiguring the descend phase of flight display configuration (pushbutton 518 for changing the ALT setting, e.g., col.

24 lines 27-34, col. 26 line 66-col. 27 line 16 and fig. 20); Briffe does not show that there are three separate pushbuttons for climbing, cruising, and descending as claimed. The Examiner believes it would have been obvious at the time of the invention, a person with ordinary skill in the art would modify the Flight Management System of Briffe in view of D'Hooge with separate pushbuttons to provide convenience and improve visibility for the flight crew.

As discussed above Briffe does not disclose reconfiguring a display configuration for climb, cruise, or descend phase of flight. Briffe only discloses changing data in a fixed display configuration. Claim 11 is allowable over Briffe in view of D'Hooge.

As to claims 7, and 12-14, the Examiner asserts that the modified Briffe in view of D'Hooge teaches the method of claim 11 wherein each of the steps of selecting the climb phase of flight configuration, the cruise phase of flight configuration, and descend phase of flight configuration are selected (e.g., col. 24 lines 27-34, col. 26 line 66-col. 27 line 16, and col. 28 lines 35-57, col. 32 line 10 and lines 50-59); and Briffe also show a middle window display configuration from the group consisting of a checklist index, a flight management system text, and a vertical terrain profile and a lower window display configuration from the group consisting of a present position, plan, datalink, charts, traffic, and maintenance formats (the Examiner believes that Briffe clearly teaches the in fig. 21 that the middle window 556 shows the checklist such as NORM, WET, DRY, etc. and the lower window 552 shows position at 18000 FT).

The Examiner's assertion regarding claims 7 and 12-14 is wrong. As discussed above Briffe does not disclose reconfiguring the display format. The Examiner's referenced columns and lines merely disclose changing data displayed in a fixed display format, e.g. col. 24 lines 27-34 disclose setting a desired speed and altitude on the display and not changing from a checklist index to a vertical terrain profile as in Applicant's invention. Claims 7 and 12-14 are allowable over Briffe in view of D'Hooge.

As to claim 1, the Examiner believes that the modified Briffe in view of D'Hooge teaches a method of selecting, displaying, and reconfiguring display

configurations on an avionics display in an avionics system on an aircraft for different phases of flight of the aircraft comprising the steps of:

selecting a prestored climb display configuration for display on the avionics display with a climb quick access pushbutton on a cursor control panel when the aircraft is in a climb phase of flight (pushbutton 518 for changing the ALT setting, e.g., col. 24 lines 27-34, col. 26 line 66-col. 27 line 16 and fig. 20, the soft buttons for setting CLIMB, DESC, and cruise speed, e.g., col. 28 lines 35-57, col. 32 line 10 and lines 50-59, and see rejection of claim 11 above);

reconfiguring the prestored climb display configuration into a new climb display configuration with controls on the cursor control panel and on the avionics display (e.g., col. 10 lines 3-53);

selecting a prestored cruise display configuration for display on the avionics display with a cruise quick access pushbutton on the cursor control panel when the aircraft changes to a cruise phase of flight (pushbutton 518 for changing ALT setting, e.g., col. 24 lines 27-34, col. 26 line 66-col. 27 line 16 and fig. 20, the soft buttons for setting CLIMB, DESC, and cruise speed, e.g., col. 28 lines 35-57, col. 32 line 10 and lines 50-59, and see rejection of claim 11 above); and

selecting a prestored descend display configuration for display on the avionics display with a descend quick access pushbutton on the cursor control panel when the aircraft changes to a descend phase of flight (pushbutton 518 for changing the ALT setting, e.g., col. 24 lines 27-34, col. 26 line 66-col. 27 line 16 and fig. 20, the soft buttons for setting CLIMB, DESC, and cruise speed, e.g., col. 28 lines 35-57, col. 32 line 10 and lines 50-59, and see the rejection of claim 11 above);

although, the Examiner believes that Briffe teaches pressing the climb quick access pushbutton for storing the new configuration (pushbutton 518 for changing the ALT setting, e.g., col. 24 lines 27-34, col. 26 line 66-col. 27 line 16 and fig. 20); Briffe does not teach of pressing the pushbutton for a predetermined time to store a new setup. The Examiner thinks that D'Hooze clearly shows that the user may press and hold the switch button for an extended period of time to indicate that the feature is desired (e.g., col. 9 line 66-col. 10 line 3). The Examiner further believes

that it would have been obvious at the time of the invention, a person with ordinary skill in the art would want to have the pressing button for a period of time of D'Hooge in the Flight Management System of Briffe to ease the user to distinguish between a normal or a desired selection which the user really wants to operate.

As discussed above Briffe does not disclose changing a display configuration such as from a checklist to a vertical terrain profile for a phase of flight. Briffe only discloses changing the data or setting that is shown in a fixed display format for a phase of flight (pushbutton 518 for changing the ALT setting, e.g., col. 24 lines 27-34, col. 26 line 66-col. 27 line 16 and fig. 20 as cited by the Examiner) on the display shown in Fig. 21. Furthermore, Briffe does not disclose climb 210, cruise 215, and descend 220 phase of flight pushbuttons as disclosed by the Applicant and shown in Figure 2 of the application. The soft buttons in col. 28 lines 35-57, col. 32 line 10 and lines 50-59 are used to select a vertical navigation mode (VNAV), a desired speed during cruise, and computation window (COMPUT). These clearly are not climb, cruise, and descend display configurations as disclosed by the Applicant. Furthermore, the Examiner has admitted in the rejection of claim 11 that "Briffe does not show that there are three separate pushbuttons for climbing, cruising, and descending as claimed". Claim 1 is clearly allowable over Briffe in view of D'Hooge.

As to claim 2, the Examiner asserts that Briffe teaches the method of claim 1 further comprising the steps of:

reconfiguring the prestored cruise display configurations into a new cruise display configuration with controls on the cursor control panel and the avionics display (setting the cruise speed, e.g., col. 28 lines 35-57, col. 32 lines 10-59); and pressing the cruise quick access pushbutton for a period of time to store the new cruise display configuration (e.g., col. 32 lines 10-59).

As discussed in the remarks above, Briffe does not teach reconfiguring the display but only discloses changing the setting (setting the cruise speed, e.g., col. 28 lines 35-57, col. 32 lines 10-59 as cited by the Examiner) and does not disclose a cruise quick access pushbutton. Claim 2 is allowable over the cited references.

As to claim 3, the Examiner thinks that Briffe in view of D'Hooge teaches the method of claim 1 further comprising the steps of:

reconfiguring the prestored descend display configuration into a new descend display configuration with controls on the cursor control panel and the avionics display (pushbutton 518 for changing the ALT setting, e.g., col. 24 lines 27-34, col. 26 line 66-col. 27 line 16 and fig. 20, the soft buttons for setting CLIMB, DESC, and cruise speed, e.g., col. 28 lines 35-57, col. 32 line 10-59); and

pressing the descend quick access pushbutton for a period of time to store the new descend display configuration (e.g., col. 24 lines 27-34, col. 26 line 66-col. 27 line 16 and fig. 20, the soft buttons for setting CLIMB, DESC, and cruise speed, e.g., col. 28 lines 35-57, col. 32 line 10-59).

As discussed in the remarks above, Briffe does not teach reconfiguring the display but only discloses changing the settings (setting the speed and altitude, e.g., col. 24 lines 27-34, as cited by the Examiner) and does not disclose a descend quick access pushbutton. Claim 3 is allowable over the cited references.

As to claim 4, the Examiner believes that the modified Briffe teaches the method of claim 1 further comprising the steps of selecting the new climb display configuration on the avionics display with the climb quick access pushbutton on the cursor control panel (e.g., col. 11 lines 56-60, col. 12 lines 5-43, and e.g., col. 39 lines 30-63).

As discussed in the remarks above, Briffe does not teach reconfiguring the display but only discloses changing the settings. Furthermore Briffe does not disclose a climb quick access pushbutton. The referenced columns and lines say nothing about a climb quick access pushbutton. Claim 4 is allowable over the cited references.

As to claim 5, the Examiner asserts that Briffe in view of D'Hooge teaches a method of selecting, displaying, and reconfiguring display configurations on an avionics display in an avionics system on an aircraft for different phases of flight of the aircraft comprising the steps of:

selecting prestored display configurations for display on the avionics display with quick access pushbuttons on cursor control panel in accordance with the

aircraft phase of flight (the flight plan can be stored in the memory and displayed on the display screen, e.g. col. 3 lines 10-30, and col. 7 lines 58-67, and fig. 21);

reconfiguring the prestored display configurations into new display configurations with controls on the cursor control panel and the avionics display (the existing flight plan displayed on the screen can be modified by the crew with new parameters, e.g., col. 39 lines 30-63); and

pressing the quick access pushbutton for a period of time to store the new display configuration (note the rejection of claim 10 above).

As discussed in the remarks for claim 10 and others above Briffe in view of D'Hooge does not disclose reconfiguring a display format but only modifying existing data as admitted to by the Examiner, "the existing flight plan displayed on the screen can be modified by the crew with new parameters". This not the same as reconfiguring a display format as disclosed by the Applicant. Furthermore, Briffe does not disclose quick access pushbuttons. Claim 5 is allowable.

As to claim 6, the Examiner states this is equivalent to claim 11 above; therefore, rejected under a similar rationale.

As discussed in the remarks above for claim 11, claim 6 is allowable for a similar rationale.

CONCLUSION

It is believed that the application is in a condition for allowance. In light of the foregoing, reconsideration of the claims is hereby requested, and a Notice of Allowance is earnestly solicited.

Respectfully submitted,



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